



# Outdoor Antenna

## User's Manual



33685  
Version 2  
12/22/15

**WARNING: INSTALLATION OF THIS PRODUCT NEAR POWER LINES IS DANGEROUS, FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS.**



**WATCH FOR WIRES! YOU CAN BE KILLED IF THIS ANTENNA COMES NEAR ELECTRIC POWER LINES. READ INSTRUCTIONS!**

## TABLE OF CONTENTS

IMPORTANT SAFETY INSTRUCTIONS .....	4
SELECT AND MEASURE YOUR INSTALLATION SITE.....	5
CHOOSE A MOUNT TYPE.....	6
ASSEMBLY INSTRUCTIONS - Parts List.....	7
ASSEMBLY INSTRUCTIONS .....	9
ANTENNA GROUNDING & CONNECTION .....	13
EASY INSTALLATION GUIDES.....	17
ANTENNA REMOVAL .....	17
ANTENNA HELPFUL TIPS.....	18

## IMPORTANT SAFETY INSTRUCTIONS:

- **NEVER** touch ANYTHING or ANYONE in contact with a power line. You can be electrocuted. In case of an accident or emergency, call 911 immediately for help.
- **INSPECT** your installation site carefully for power lines. Make sure there is no possibility the antenna, its mounting structure or your ladder can come into contact with power lines. Be sure to consider what can go wrong during installation.
- **KEEP** the distance between power lines and the antenna and its mounting structure at least 2 times the combined height of the antenna and mounting structure added together. In the event the antenna falls, during or after assembly, there must be sufficient distance to ensure it does not come into contact with the power lines.
- **KEEP** your ladder, antenna and antenna mounting structure, such as mast, pole, mount, far away from power lines at all times.
- **GROUND** the antenna and the antenna mounting structure in accordance with the NEC electrical code, all state and local electrical code requirements
- **COMPLETE** the antenna assembly on the ground prior to mounting.
- **DO NOT** use a metal ladder or install the antenna on a windy day. If the antenna or mast starts to fall, allow it to fall. Do not attempt to catch the antenna.
- **EXERCISE** caution when working on a roof.
- **APPLY** the danger label included to the base of the antenna mounting structure.
- **INFORM** others of the danger of touching power lines or touching other objects in contact with power lines.
- **CONTACT** a professional installer in your area to do the antenna installation if you are unsure how to safely install and ground this antenna.

## SELECT AND MEASURE YOUR INSTALLATION SITE

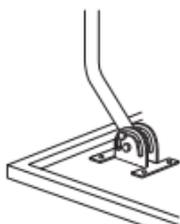
Key things to consider in choosing the antenna installation site are:

- 1) Choose a **SAFE** location that is far away from power lines. Keep the distance between power lines and the antenna and its mounting structure at least 2 times the combined height of the antenna and its mounting structure added together. Refer to the **Important Safety Instructions**.
- 2) Determine the location of the broadcast towers in your area. You will need to point the small end of your antenna toward those towers. There are online resources such as [www.antennaweb.org](http://www.antennaweb.org) that can help you identify the location of your local broadcast towers and the channels you can expect to receive.
- 3) Check your local, city and state building and electrical codes. Make sure your planned installation is safe and in compliance with all applicable codes, rules and regulations.

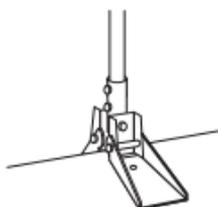
## CHOOSE A MOUNT TYPE:

Some examples of common mounting options are shown below. Follow the installation instructions for the mount you will use.

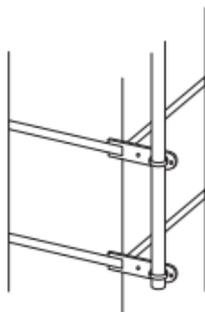
- 1) J-Mount:**  
(Provided)



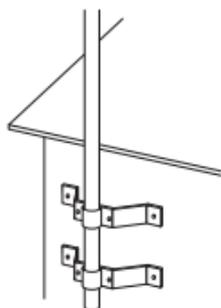
- 2) Ridge Mount:**  
(Not provided)



- 3) Chimney Mount:**  
(Not provided)



- 4) Wall Mount:**  
(Not provided)



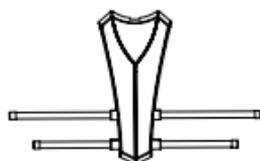
**IF YOU ARE UNSURE OR DO NOT FEEL CAPABLE  
OF INSTALLING THIS ANTENNA, CONTACT  
A PROFESSIONAL INSTALLER IN YOUR AREA.**

## ASSEMBLY INSTRUCTIONS:

Thank you for purchasing the **GE 33685 Outdoor Antenna**. This antenna is a sturdy, high-performing antenna designed to receive UHF and VHF broadcasted signals. The small, compact design allows you to install the antenna almost anywhere on the outside of your house.

### PARTS LIST:

- 1) Main Housing Unit 1 ea.



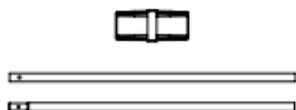
- 2) Main Boom 1 with Short Dipoles 1 ea.



- 3) Main Boom 2 with VHF Elements 1 ea.



- 4) Main Boom Connector Piece 1 ea.  
(pre-attached to the **Main Boom 1**)



- 5) UHF Elements (32.5cm) 2 ea.



- 6) Mounting Bracket 1 ea.



- 7) "J" Mount (15/16" or 2.5cm) 1 ea.



- 8) "U" Bolt and Clamp Assembly 1 ea.  
a) Brass plate 1 ea.  
b) Wing Nuts (#10 X 24) 2 ea.



- 9) Wing Nuts (#6 X 32) 4 ea.  
(pre-attached to the **Main Housing Unit**)



- 10) Rubber Boot 1 ea.



## PARTS LIST (CONT):

12) ¼ X 2" Lag Screws 4 ea.



13) M6 X 50mm Bolts 2 ea.



14) M6 Locking Nuts 2 ea.



15) M6 Washers 4 ea.



16) M5 X 40mm Bolt 1 ea.



17) M5 Nut 1 ea.



18) M4 Lock washers 2 ea.  
(pre-attached to the **Main Housing Unit**)



19) Small Zip Tie 1 ea.



20) Large Zip Tie 2 ea.



21) M3 X 16mm self-tapping screw 1 ea.



22) Danger Label 1 ea.



## ASSEMBLING THE ANTENNA:

### 1) Connecting the UHF Dipoles

- a) Turn the **Main Housing Unit** with the bottom side facing up. (Fig. 1a)



Fig. 1a

- b) Slide one of the **UHF Elements** into the **Main Housing Unit** from the left side. (Fig. 1a)
- c) Slide the other **UHF Element** into the **Main Housing Unit** from the right side into the first **UHF Element**. (Fig. 1b)
- 1b) Align the holes of the **UHF elements** with the embossed black markings in the center of the **Main Housing Unit**.



Fig. 1b

- d) Secure with the **M3 x 16mm Self-Tapping Screw**. (Fig. 1c)
- 1c)

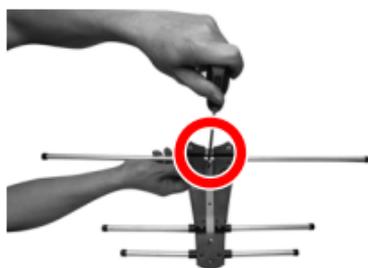


Fig. 1c

## 2) Main Boom Assembly:

- a) Take the **Main Boom 1**, turn it with the short dipoles facing up.
- b) Take the **Main Boom 2**, turn it with the VHF connector rods marked L and R facing up and slide the **Main Boom 2** onto the **Main Boom Connector Piece** pre-attached to the **Main Boom 1**. (Fig. 2)

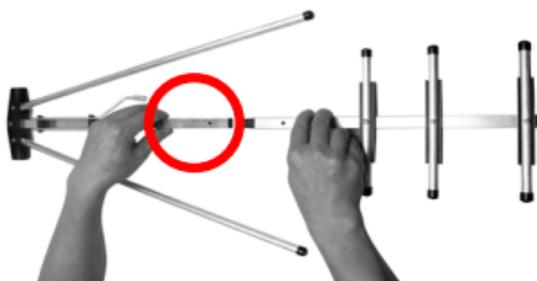


Fig. 2

## 3) Assembling the Main Boom To The Main Housing Unit:

- a) Position the **Main Housing Unit** with the bottom side facing up. Remove the four **#6 X 32 Wing Nuts** and the two **M4 Lock Washers**.
- b) Lay the assembled **Main Boom** into the **Main Housing Unit**. (The **Main Boom** with the short dipoles is positioned at the narrow end of the **Main Housing Unit**)
  - i. Secure the **Main Boom** assembly to the **Main Housing Unit** using two **#6 X 32 Wing Nuts** just removed. (Fig. 3a)

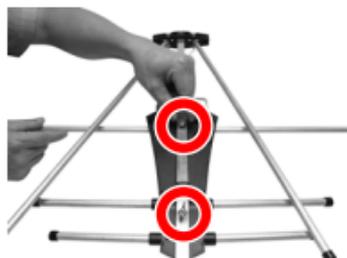


Fig. 3a

- ii. Slide the two VHF connector rods marked L and R over the two bolts on the **Main Housing Unit**, slide the **M4 Lock Washers** onto the bolts and secure with the **#6 X 32 Wing Nuts**. (Fig. 3b)

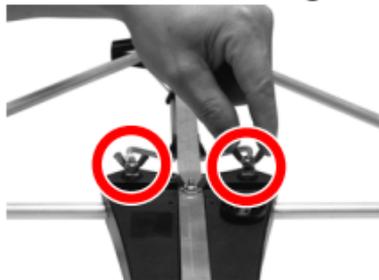


Fig. 3b

- iii. Unfold the two VHF element rods and snap into the bracket. (Fig. 3c)



Fig. 3c

#### 4) Attach the Mast Clamp to the Main Boom:

- a) Remove the two **#10 X 24 Wing Nuts** from the **"U" Bolt and Clamp Assembly**.
- b) Attach the **Brass Plate** provided with the **"U" Bolt and Clamp Assembly** to the **Antenna Main Boom**. (Fig. 4)
- c) Slide the **"U" Bolt** into the holes on the **Antenna Main Boom** from the opposite side of the **Brass Plate**. (Fig. 4)



Fig. 4

- e) Thread the **Wing Nuts** partially back onto the **"U" Bolt**. (Fig. 4)

## 5) Installing the Assembled Antenna:

- a) Locate a position on the house that is far away from power lines. Refer to the **Important Safety Instructions**.
- b) Secure the **Mounting Bracket** to the location selected for the antenna. The **1/4 X 2" Lag Screws** have been provided for some installations.
- c) Connect the **"J" mount** to the **Mounting Bracket** (Fig. 5a) using the **M6 X 50mm Bolts, M6 Locking Nuts** and **M6 Washers**.



Fig. 5a

- d) Position the **J-Mount** perpendicular to the ground using a small level.
- e) Slide the **Antenna** onto the **"J" Mount**. (Fig. 5b) Point the small end of the antenna in the direction of the broadcast towers in your area. Tighten the **Wing Nuts** on the **"U" Bolt** when the antenna is in the desired position.



Fig. 5b

## Antenna Grounding & Connection

The National Electric Code (NEC) requires your outdoor antenna installation to be properly grounded. This involves grounding both the antenna and the antenna mounting structure. This helps protect you and your property in the event of static build up on the antenna or lightning near your home.

**Note:** *If you previously had a satellite or cable system installed at your home, you may be able to use some of the parts from this system for your antenna installation.*

- a) **Ground the Antenna Mount:** Attach a #8 aluminum or a #10 copper grounding wire to the antenna mounting structure, for example pole, mast, tower, etc. In some cases, a bolt on the mount can be used for making this connection. When using the “**J**” Mount provided, use the **M5 Bolt** and **M5 Nut** in the hole on the “**J**” Mount located just above the **Mounting Bracket** to make this connection. (Fig. 6a)

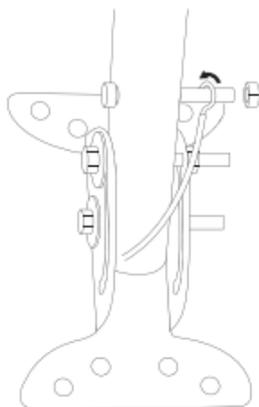


Fig. 6a

Tighten this connection securely. Ensure there is a good electrical connection between your mounting structure and grounding wire. Run the grounding wire as straight as possible and use stand-off insulators spaced four (4) to six (6) feet apart. Attach the grounding wire to an acceptable building ground location.

Examples of acceptable building grounding locations are:

- The building or structure grounding electrode system as covered in 250.50 in the NEC.
- Grounded interior metal water piping system, within 5ft. from its point of entrance to the building
- Grounded nonflexible metallic power service raceway
- Service equipment enclosure, the grounding electrode conductor or the grounding electrode conductor metal enclosure of the power service.
- An 8-foot grounding rod driven into the ground can be used as long as it is connected to the central building ground by a #6 or heavier bonding wire.

Refer to the NEC sections 250 and 810 for other acceptable grounding methods.

- b) **Antenna Connection:** Connect one end of a coax cable to the antenna and the other end to a 75 ohm grounding block. Below (Fig. 6b) is an example of a 75 ohm grounding block.

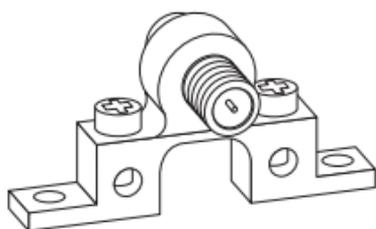


Fig. 6b

If you make your own coax cable, be sure to slide the **Rubber Boot** over the cable before you place the connectors on the cable. Once you have attached the cable to the antenna, slide the **Rubber Boot** into the round channel on the **Main Housing Unit**.

If you are using a pre-built cable that has connectors, follow these steps.

- i. Cut 4 slits spaced evenly apart at the narrow tip of the provided **Rubber Boot** approximately  $\frac{1}{4}$ " in length. (Fig. 6c)



Fig. 6c

- ii. Run the coax cable through the narrow end of the **Rubber Boot** and attach the cable to the antenna.
- iii. Slide the **Rubber Boot** into the round channel on the **Main Housing Unit**.
- iv. Using the **Small Zip Tie**, wrap the tie around the narrow tip of the **Rubber Boot**, around the four slits and pull the tie tight.

Use a second coax cable and connect one end to the mating port of the first coax cable on the 75 ohm grounding block and run the other end into your home for making the connection to your TV. The 75 ohm grounding block needs to be placed as close as possible to the point where the second coax cable enters your home

**Note:** Leave enough slack in the coax cable to create a drip loop so that moisture cannot enter the house. You will also need to seal the coax cable entry point into your house with an exterior caulk.

- c) **Ground the 75 OHM Grounding Block:** Connect a #8 aluminum or #10 grounding wire to a screw terminal provided on the 75 ohm grounding block. Connect the other end of the wire to an acceptable building ground location. Refer to step a) in this section for acceptable building grounding locations.

Be sure to double check all your connections after your installation is complete. Ensure there are good electrical connections of your grounding wires and coax cables. See Fig. 6d below for an example of a properly grounded antenna installation.

Example of Antenna Grounding  
as per NEC - National Electrical Code

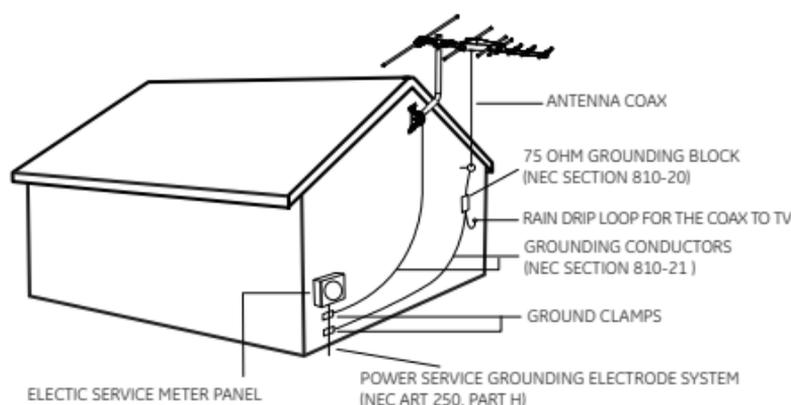


Fig. 6d

**If you are unsure how to properly ground your antenna installation, contact a professional installer in your area.**

- d) **Danger Label Application:** If your antenna mounting structure, such as a mast, J-Mount or pole, does not have a danger label, apply the danger label provided to the base of the mounting structure in a clearly visible location.

## **Easy Installation Guides**

### **EASY INSTALLATION FOR TODAY'S HDTVS**

- 1) Connect the coax cable from the antenna to the antenna input on your HDTV.
- 2) Follow your HDTV's instruction manual to scan for channels on your television.

### **EASY INSTALLATION FOR ANALOG TVS WITH SET-TOP BOX**

- 1) Connect the coax cable from the antenna to your set-top box antenna input. Then connect another coax cable (not included) to the antenna output on the set-top box.
- 2) Connect the other end of that cable to the antenna input on your TV.
- 3) Follow your set-top box instruction manual to scan for channels on your set-top box.

### **ANTENNA REMOVAL**

Inspect the area carefully for power lines. Look for any new power lines that may have been installed. Make sure there is no possibility the antenna, its mounting structure or your ladder can come in contact with power lines. Be sure to consider what can go wrong during the antenna removal. Repeat the steps for antenna installation but in reverse order.

## ANTENNA HELPFUL TIPS

**Maximize** the number of channels you receive by aiming the antenna in different directions to see which position provides the best reception and the maximum number of channels. Be sure to run a new channel scan for each position. Refer to the instruction manual that came with your TV if you are not sure how to do this.

**Visit** [www.antennaweb.org](http://www.antennaweb.org) or [www.dtv.gov](http://www.dtv.gov) and look for the DTV Reception Maps to determine the available television stations and location of the broadcast towers in your area.

**FOR FURTHER ASSISTANCE, CALL 1-800-654-8483 FOR TECHNICAL SUPPORT.**

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This Jasco product comes with a limited-lifetime warranty. Visit [www.byjasco.com](http://www.byjasco.com) for warranty details and product registration.

Questions? Contact us at 1-800-654-8483 between 7:30AM—5:00PM CST.